

IGF2BP3 (DE-7): sc-100766

BACKGROUND

Insulin like growth factor 2 mRNA binding proteins (IGF2BPs) bind RNA and influence RNA synthesis and metabolism. IGF2BP1, also known as coding region determinant-binding protein/insulin-like growth factor II mRNA-binding protein (CRD-BP), IMP1 or VICKZ1; IGF2BP2 (IMP2, VICKZ2, p62); and IGF2BP3 (IMP3, KOC1, VICKZ3) contain a unique combination of RNA recognition motifs and four hnRNP K homology domains. IGF2BP1 is abundant in embryonal tissues and is expressed in 81% of colon cancers, 73% of sarcomas and 58.5% of breast cancers. It recognizes c-Myc, IGF-II and t mRNAs, and H19 RNA, and plays a major role in proliferation of K-562 cells by an IGF-II-dependent mechanism. IGF2BP2 binds the 5' UTR of IGF-II mRNA and influences tumor cell growth, in which IGF2BP2 is associated with apoptosis induced by tretinoin. IGF2BP3 knockdown by RNA interference decreases levels of IGF-II protein without affecting IGF-II, c-Myc, or β Actin mRNA and H19 RNA levels. IGF2BP3 is a marker for carcinomas and high-grade dysplastic lesions of pancreatic ductal epithelium.

REFERENCES

1. Leeds, P., et al. 1997. Developmental regulation of CRD-BP, an RNA-binding protein that stabilizes c-Myc mRNA *in vitro*. *Oncogene* 14: 1279-1286.
2. Ioannidis, P., et al. 2001. c-Myc and IGF-II mRNA-binding protein (CRD-BP/IMP-1) in benign and malignant mesenchymal tumors. *Int. J. Cancer* 94: 480-484.
3. Ioannidis, P., et al. 2003. 8q24 Copy number gains and expression of the c-Myc mRNA stabilizing protein CRD-BP in primary breast carcinomas. *Int. J. Cancer* 104: 54-59.
4. Liao, B., et al. 2004. Targeted knockdown of the RNA-binding protein CRD-BP promotes cell proliferation via an Insulin-like growth factor II-dependent pathway in human K-562 leukemia cells. *J. Biol. Chem.* 279: 48716-48724.
5. Ping, S., et al. 2005. Effect of all-*trans*-retinoic acid on mRNA binding protein p62 in human gastric cancer cells. *Int. J. Biochem. Cell Biol.* 37: 616-627.
6. Liao, B., et al. 2005. The RNA-binding protein IMP-3 is a translational activator of Insulin-like growth factor II leader-3 mRNA during proliferation of human K-562 leukemia cells. *J. Biol. Chem.* 280: 18517-18524.
7. Ioannidis, P., et al. 2005. CRD-BP/IMP-1 expression characterizes cord blood CD34⁺ stem cells and affects c-Myc and IGF-II expression in MCF-7 cancer cells. *J. Biol. Chem.* 280: 20086-20093.

CHROMOSOMAL LOCATION

Genetic locus: IGF2BP3 (human) mapping to 7p15.3; Igf2bp3 (mouse) mapping to 6 B2.3.

SOURCE

IGF2BP3 (DE-7) is a mouse monoclonal antibody raised against recombinant IGF2BP3 of human origin.

PRODUCT

Each vial contains 200 μ l ascites containing IgM with < 0.1% sodium azide.

APPLICATIONS

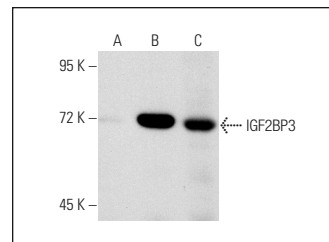
IGF2BP3 (DE-7) is recommended for detection of IGF2BP3 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000).

Suitable for use as control antibody for IMP-3 siRNA (h): sc-60846, IMP-3 siRNA (m): sc-60847, IMP-3 shRNA Plasmid (h): sc-60846-SH, IMP-3 shRNA Plasmid (m): sc-60847-SH, IMP-3 shRNA (h) Lentiviral Particles: sc-60846-V and IMP-3 shRNA (m) Lentiviral Particles: sc-60847-V.

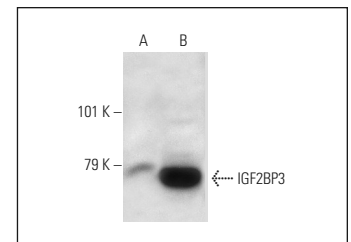
Molecular Weight of IGF2BP3: 69 kDa.

Positive Controls: IGF2BP3 (m): 293T Lysate: sc-121055, K-562 whole cell lysate: sc-2203 or IGF2BP3 (h): 293T lysate: sc-117068.

DATA



IGF2BP3 (DE-7): sc-100766. Western blot analysis of IGF2BP3 expression in non-transfected 293T: sc-117752 (A), mouse IGF2BP3 transfected 293T: sc-121055 (B) and K-562 (C) whole cell lysates.



IGF2BP3 (DE-7): sc-100766. Western blot analysis of IGF2BP3 expression in non-transfected: sc-117752 (A) and human IGF2BP3 transfected: sc-117068 (B) 293T whole cell lysates.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.